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Studies on the Rocky Mountain flora—XXI

PER AXEL RYDBERG

Ambrosia media sp. nov.

Annual ; stem 4–6 dm. high, hispid with ascending or appressed short hairs, more or less strigose, branched ; leaves pinnately divided, thick, 5–10 cm. long, scabrous and glandular-granuliferous above, hispid-strigulose beneath, all except the uppermost with shorter or longer, hirsute-ciliate, narrowly winged petioles ; divisions oblong or lanceolate, usually more or less cleft or toothed, the lobes or teeth lanceolate, acute ; staminate racemes rather dense ; involucre nodding, slightly lobed with 5 rounded lobes and crenulate, 4–5 mm. in diameter, hispid-strigose ; hairs about 0.5 mm. long, with more or less pustulate bases ; receptacle with few narrow lance-subulate scales ; fruit obovoid ; body about 3 mm. long, puberulent or in age glabrate, with 5–7 sharp spines 0.5 mm. long and strongly directed forward ; beak about 1 mm. long, pubescent.

In the form and texture of the foliage, this species resembles *A. coronopifolia* T. & G. (*A. psilostachya* of most authors) as closely as to make it almost impossible to distinguish the two by the leaves alone, the only difference being that the leaves of *A. media* are more inclined to be petioled and the petioles distinctly hispid-ciliate. Otherwise, the plant is more closely related to *A. elatior* and *A. artemisiifolia*, the root being annual and the fruit spiny. *A. coronopifolia* has a larger fruit, which is inclined to be round-elliptic instead of obovoid, is more pubescent, without spines, either perfectly smooth or rarely with small rounded tubercles.

COLORADO : Fort Collins, Aug. 27, 1885, *C. S. Crandall* (type, in herb. N. Y. Bot. Gard.).

NEW MEXICO : Pecos, San Miguel County, Aug. 20, 1898, *Standley 5138* ; Kingston, 1904, *Metcalf 1337* (?).

COAHUILA : Saltillo 1898, *Palmer 293*.

MONTANA : Sand Coulee, Sept. 7, 1885, *R. S. Williams*.

NEBRASKA : Chadron, Oct. 9, 1897, *J. M. Bates 706* (plants predominantly pistillate).

***Grindelia integerrima* sp. nov.**

Perennial, with a caespitose base; stems about 3 dm. high, glabrous, somewhat angled by the decurrent lines; leaves narrowly oblanceolate, 2–4 cm. long, acute, strongly resinous-dotted, entire; heads numerous, corymbose; involucre about 7 mm. high and 1 cm. wide; bracts lanceolate, with very short, terete, squarrose tips; ligules 6–7 mm. long; pappus-bristles slightly flattened, curved and twisted, 3 mm. long, about the length of the achenes.

This somewhat resembles *Grindelia nana* in general habit but differs in the broader bracts with much shorter tips and the strongly curved and twisted pappus-bristles.

IDAHO: Sandy soil near Granite Station, Kootenai County, July 29, 1892, *Sandberg, MacDougal, & Heller 784* (type, in herb. N. Y. Bot. Gard.).

***Grindelia columbiana* (Piper) Rydb. comb. nov.**

Grindelia discoidea Nutt. Trans. Am. Phil. Soc. **7**: 315. 1840.

Not *G. discoidea* H. & A. 1836.

Grindelia nana discoidea A. Gray, Syn. Fl. **1**²: 119. 1884.

Grindelia nana columbiana Piper, Contr. U. S. Nat. Herb. **11**: 556. 1906.

***Chrysopsis angustifolia* sp. nov.**

Chrysopsis stenophylla Britt. & Brown, Ill. Fl. **3**: 327. 1898.

Not *C. stenophylla* (A. Gray) Greene. 1884.

Perennial, with a caespitose caudex; stems erect, 2–4 dm. high, canescent and more or less hirsute; leaves narrowly linear-oblanceolate, the lower short-petioled, the upper sessile, 2–5 cm. long, 2–5 mm. wide, acute, grayish-strigose on both sides, somewhat hispid-ciliate on the lower portion; involucre turbinate-campanulate, 8–10 mm. high and about as broad; bracts narrow and linear, acute, grayish-strigose; rays about 1 cm. long; achenes canescent; outer pappus of short bristles; inner pappus-bristles tawny.

This is intermediate between *Chrysopsis foliosa* and *C. stenophylla*. It resembles the latter in leaf-form but differs in being more canescent, less hispid, not at all viscid, and in the bracts, which are narrower, and strigose-canescens instead of hispid and viscid-puberulent. From *C. foliosa* it differs in the narrower, spreading leaves, the more distinctly peduncled heads, and less white pubescence.

NEBRASKA: Middle Loup River, near Mullen, Hooker County, Sept. 14, 1893, *P. A. Rydberg 1766* (type, in herb. N. Y. Bot. Gard. and Columbia Univ.); Long Pine, Sept. 14, 1890, *J. M. Bates*; Deuel County, Aug. 24, 1891, *Rydberg 149*.

KANSAS: Kiowa County, Sept. 4, 1898, *L. F. Ward*.

ALBERTA: Vicinity of Banff, Aug. 14, 1899, *McCalla 2032*, in part.

***Chrysopsis Butleri* sp. nov.**

Perennial; stem decumbent at the base or erect, grayish-hispidulous and slightly hirsute; leaves 1–3 cm. long, the lower obovate, the upper oblong or elliptic, obtuse or apiculate, often spreading, sessile, grayish-hirsute with short hairs; heads peduncled but usually subtended by an oblong small leaf; involucre 8 mm. high, 10–15 mm. broad; bracts linear, acute, hirsutulous, but not at all glandular or viscid; ligules about 8 mm. long; achenes silky-strigose; pappus tawny, the outer of minute bristles.

This species is characterized by the small, obovate or elliptic, subsessile leaves, which are often spreading and with short spreading pubescence. Nearly all the species of the *Chrysopsis villosa* group, with spreading pubescence, are more or less viscid or glandular, but this is not at all the case with *C. Butleri*. In leaf-form it resembles *C. villosa*, but both leaves and heads are smaller and the pubescence is different. In *C. villosa* the hairs are at least in the young state appressed.

MONTANA: Gateway, Aug. 17, 1908, *B. T. Butler 620* (type, in herb. N. Y. Bot. Gard.); Midvale, Sept. 3, 1901, *Umbach 564*; Wild Horse Island, Aug. 13, 1908, *Butler 480, 481, 485, 491*.

WYOMING: Near Fort Laramie, 1842, *Fremont 482*.

UTAH: City Creek Cañon, 1875, *M. E. Jones*; same locality, Oct. 7, 1905, *Garrett 1703*.

***Chrysopsis grandis* sp. nov.**

Perennial, with a caespitose caudex; stems about 3 dm. high, leafy, long-hirsute, hispidulous and resinous-granuliferous; leaves spatulate or oblanceolate, 3–5 cm. long, the lower petioled, the upper sessile, hirsute or hispid and conspicuously resinous-granuliferous, apiculate; heads corymbose, short-peduncled, rarely subtended by a small leaf; involucre 8 mm. high, 12–18 mm. broad; bracts densely hirsute, only slightly granuliferous; rays golden yellow, about 1 cm. long; achenes strigose; pappus yellowish tawny, the outer of short bristles.

This species is related to *Chrysopsis hispida* and *C. columbiana*, but differs from both in the larger heads; it differs also from the former in the more copious pubescence and the more decidedly oblanceolate and petioled leaves; from the latter in the longer pubescence, the more copious resinous granules and the more decidedly petioled leaves.

MONTANA: Jocko Creek, June 16, 1901, *MacDougal* 275 (type, in herb. N. Y. Bot. Gard.); also 265.

***Chrysopsis barbata* sp. nov.**

Perennial; stems about 3 dm. high, more or less tinged with purplish or red, hirsute with long white hairs and somewhat puberulent; leaves sessile, lanceolate, 3–5 cm. long, the upper acuminate, long-hirsute and somewhat resinous-granuliferous; heads subsessile; involucre 1 cm. high and 12–15 mm. broad; bracts linear, acute, sparingly long-hirsute and resinous-granuliferous; ligules about 7 mm. long, golden yellow; achenes strigose; pappus brownish tawny, the outer squamulate, 1–1.5 mm. long.

This species is related to *Chrysopsis hispida* but differs in the long, dense pubescence, a much less abundance of resinous granules, larger leaves and heads, and more conspicuous outer pappus. It grows on sandy plains.

IDAHO: Valley of Spokane River, Kootenai County, July 17, 1893, *Sandberg*, *MacDougal*, & *Heller* 664 (type, in herb. N. Y. Bot. Gard.).

***Chrysothamnus attenuatus* (Jones) Rydb. sp. nov.**

Bigelovia Howardi attenuata Jones, Bull. Calif. Acad. Sci. II. 5: 691. 1895.

Chrysothamnus affinis attenuatus A. Nels. Bot. Gaz. 28: 374. 1899.

***Chrysothamnus salicifolius* sp. nov.**

A shrub 3–10 dm. high; branches erect, white or gray, finely pannose-tomentulose; leaves linear, 3-nerved, 4–6 cm. long, 3–6 mm. wide, minutely tomentulose; heads in a dense corymbiform cyme; involucre 7–8 mm. long; bracts elliptic, oval or ovate, the outer acutish, the inner obtuse or rounded at the apex, erose-ciliate, the outer slightly tomentose, the inner glabrous; corollas about 1 cm. long; teeth 1.5–2 mm. long, lanceolate, obtusish; achenes coarsely strigose, angled.

This species resembles *Chrysothamnus graveolens* in habit, but the leaves are broader, more tomentulose ; the bracts are slightly tomentulose, erose-ciliate, and broader than in that species. Ward's specimens were determined by Dr. Gray as *Bigelovia graveolens latisquamea* and included therein in the Synoptical Flora ; but it is wholly distinct therefrom. The true *C. latisquamea* (A. Gray) Greene has very white filiform-revolute leaves and the bracts more rounded at the apex.

UTAH : Strawberry Valley, Sept. 3, 1883, *F. E. Leonard* 288 (type, in herb. N. Y. Bot. Gard.) ; Twelve-mile-Creek, Aug. 29, 1875, *L. F. Ward* 659.

***Chrysothamnus stenolepis* sp. nov.**

Low shrub, 2-3 dm. high, somewhat spinescent ; branches short, erect, glabrous or finely puberulent above ; leaves narrowly lance-linear, 1-2 cm. long, 2-4 mm. wide, glabrous, scabrous-ciliate on the margins, convolute and somewhat twisted ; inflorescence corymbiform, of few heads ; involucre about 8 mm. long ; bracts 4-ranked in 3 series, narrowly lanceolate, or the inner linear, acute, glabrous, keeled, somewhat viscid ; corollas scarcely exceeding the involucre ; lobes lanceolate, 2 mm. long ; achenes hirsute-strigose.

This species is related to *Chrysothamnus viscidiflorus* and *C. glaucus*, but differs from both in the very narrow acute bracts.

MONTANA : Pass Creek, near Bridger Pass, *H. Engelmann* (type, in herb. Columbia Univ.).

UTAH : Saleratus River, Aug. 1889, *C. K. Dodge*.

***Chrysothamnus marianus* sp. nov.**

Undershrub, 1-2 dm. high, with a woody thick caudex ; branches erect, at first green, soon straw-colored or white, densely and finely puberulent ; leaves linear or the lower linear-oblongate, acute, thick, densely puberulent, 1-2 cm. long, 1-15 mm. wide, 1-nerved, somewhat twisted ; heads narrow, in small, corymbiform-cymose panicles, involucre about 5 mm. high ; bracts yellowish, glutinous, erose-ciliate on the margins, 4-ranked and in about 3 series, the outer ovate, acutish, the inner spatulate-oblong, rounded at the apex ; achenes sparingly strigose ; corollas scarcely exceeding the involucre.

This species has many characters of *Chrysothamnus puberulus*,

but differs in the more yellowish-green herbage, the whiter stems, the narrower, more erect, thick, 1-nerved instead of 3-nerved leaves, the finer pubescence, and the involucre, which are narrower and with different bracts. In *C. puberulus* the inner bracts are linear or linear-lanceolate and acute. The young achenes are only slightly strigose, in which respect it approaches *C. Bakeri* and *C. Vaseyi*.

UTAH : Along Sevier River, below Marysville, July 20, 1905, Rydberg & Carlton 6993 (type, in herb. N. Y. Bot. Gard.) ; also 6983; Mount Barette, July 26, 7253.

SOLIDAGO MISSOURIENSIS Nutt. Jour. Acad.

Phila. 7 : 32. 1834

Solidago Tolmieana A. Gray, Syn. Fl. 1¹ : 151. 1884.

Dr. Gray in the original publication of *S. Tolmieana* adds the following note : "Has been taken for a form of *S. missouriensis* var. *montana* ;" but he overlooked the fact that it was identical with the original *S. missouriensis*. He might have been led astray by Nuttall himself, who later included in *S. missouriensis* the common plant of the upper Missouri Basin with recurved second branches. That the latter is not the original *S. missouriensis* may be seen from Nuttall's diagnosis, of which I here give a copy :

"55 SOLIDAGO * *missouriensis*. Pumila, glabra, racemis erectis, foliis lineari-lanceolatis, acutis, inciso-serrulatis, superioribus integris, panícula brevi laxa, floribus majusculis."

"Stem slender, smooth, leafy, about a foot or so high. Leaves scabrous at the margin. Panicle about three inches long, the branches slender, the flowers pedicellate, and brought together in a somewhat rhomboidal raceme. Rays as long as the calyx."

This agrees with *S. Tolmieana* but not with the plant described by Gray as *S. missouriensis*.

The original *Solidago missouriensis* was collected by Wyeth on the upper branches of the Missouri. There is a specimen of this collection in the Torrey Herbarium which agrees with the description and this matches very well the type of *S. Tolmieana* in the Gray Herbarium. The plant described by Gray as *S. missouriensis* is characterized by its flat-topped or round-topped inflorescence with recurved-spreading, second branches, in variance with Nuttall's characterization : "racemis erectis," and "the flow-

ers pedicellate, and *brought together* in a somewhat rhomboidal *raceme*." The synonymy of Gray's plant is as follows :

SOLIDAGO GLABERRIMA Martens, Bull. Acad.
Brux. 8: 68. 1841

Solidago missouriensis Nutt. Trans. Am. Phil. Soc. II. 7: 327, in part. 1840. Not *S. missouriensis* Nutt. 1834.

Solidago missouriensis A. Gray, Syn. Fl. 1²: 155. 1884.

Solidago serotina Hook. Comp. Bot. Mag. 1: 97. 1835. Not *S. serotina* Ait. 1789.

***Solidago glaucophylla* sp. nov.**

Perennial, with a branching rootstock ; stems slender, pale, glabrous up to the sparingly pubescent inflorescence ; leaves glabrous, glaucous, minutely ciliate on the margins, rather thick, linear-ob lanceolate or the upper linear, triple-nerved, 6–10 cm. long, 4–10 mm. wide, entire, acute ; inflorescence a round-topped panicle, the branches somewhat recurved-spreading and somewhat secund ; heads about 5 mm. high ; bracts oblong, obtuse, or the outer lance-oblong, acutish ; rays short, 2–2.5 mm. long, 0.7–0.8 mm. wide ; achenes slightly strigose-hirsute.

This species is related to *Solidago missouriensis* and *S. glaberrima*, but differs from both in the narrow, entire, glaucous leaves and the thicker, oblong and obtuse instead of linear-lanceolate and acute bracts. The type grew on dry plains at an altitude of 1000 m.

MONTANA : Dry plains near Kalispel, Flathead Valley, July 25, 1901, *MacDougal* 760 (type, in herb. N. Y. Bot. Gard.).

WYOMING : Buffalo, July 25, 1896, *A. Nelson* 2501 (? similar but with narrower inflorescence).

***Solidago nivea* sp. nov.**

Perennial, with a woody caespitose rootstock and short caudex ; stems 1–2 dm. high, decumbent at the base, canescent-puberulent ; basal leaves 2–4 cm. long, short-petioled ; blades obovate-spatulate, rounded at the apex, entire or nearly so ; stem-leaves oblanceolate, sessile, the upper acutish ; all leaves thick, densely canescent-puberulent, almost velvety and almost white ; inflorescence a flat-topped corymbiform panicle ; heads slightly nodding at first, but not secund on the branches, about 6 mm. high ;

bracts yellowish with a greenish midrib, lanceolate and acute; achenes hirsute-strigose; ligules 3 mm. long and nearly 1 mm. wide.

This is closely related to *Solidago nana*, but differs in the narrower, lanceolate, and acute bracts. Its pubescence is usually also denser and whiter. Platt's specimens were labeled *S. missouriensis* v. *montana* Gray, to which it has no relationship, only resembling it a little in habit and in the narrow bracts.

MONTANA: Lima, Aug., 1905, *Rydberg 2804* (type, in herb. N. Y. Bot. Gard.); Hot Sulphur Springs, July 24, 1871, *W. B. Platt*.

***Solidago Garrettii* sp. nov.**

Perennial, with a creeping rootstock; stem 2–3 dm. high, sparingly puberulent or glabrous; leaves obovate-spatulate or the upper oval, entire or the lower toothed towards the apex, rather thin, triple-nerved, minutely and sparingly scabrous-puberulent or nearly glabrate, scabrous-ciliolate on the margins, 3–6 cm. long; inflorescence more or less leafy, with a few secund branches; heads 5–6 mm. high; bracts lanceolate, acute, yellowish; ligules 2 mm. long and fully 0.5 mm. wide, golden yellow; achenes sparingly hirsute.

This species is related to *Solidago mollis*, *S. radulina*, and *S. Radula*. It differs from the first in the thinner, green, more decidedly obovate, and sparingly pubescent leaves, and the open, few-branched panicle; from *S. radulina* in the larger, thinner leaves, the open and more leafy inflorescence, and the acute instead of obtuse bracts; and from *S. Radula* in the thin, broad leaves, large, ample upper stem-leaves, the small inflorescence, and acute bracts.

UTAH: Big Cottonwood Cañon, Aug. 28, 1906, *A. O. Garrett 2041* (type, in herb. N. Y. Bot. Gard.); same locality and collector, Aug. 14, 1905, *1608*, and Aug. 5, 1905, *1587*.

WYOMING: Headwaters of Cliff Creek, Aug. 9–18, 1900, *C. C. Curtis*.

ASTER RICHARDSONII Sprengel, Syst. 3: 528. 1826

Aster montanus Richards. App. Frankl. Journ. 749. 1823. Not *A. montanus* Nuttall. 1818.

Aster salsuginosus Less. Linnaea 6: 124. 1831. Not *A. salsuginosus* Richards. 1823.

Aster Richardsonii, var. *gigantea* Hook. Fl. Bor.-Am. 2: 7. 1834.

Aster sibiricus giganteus A. Gray, Syn. Fl. 1²: 177. 1884.

Aster giganteus Rydb. Bull. N. Y. Bot. Gard. 2: 184. 1901.

In describing *Aster meritus*,* Professor Aven Nelson evidently was correct in referring the name *A. Richardsonii* Spreng. to the subarctic species, characterized by the densely villous peduncles and involucre, which the writer has named *A. giganteus*. Richardson collected both, as shown by specimens in the Columbia University herbarium, and evidently included both under the name *A. montanus*, but his description applies only to the plant which Hooker afterwards named and described as *A. Richardsonii*, var. *gigantea*. There are, however, two points in Professor Nelson's discussion which are a little erroneous, ambiguous, and unclear, wherefore I add the following.

Professor Nelson has made the following remarks: "It is equally clear that *A. Richardsonii* is the name given to the *A. montanus* Nutt." If this was true, *A. Richardsonii* should be a synonym of *A. sericeus montanus* of the Southern States, and I received that impression when I read Professor Nelson's discussion. Evidently this was not Professor Nelson's intention. He evidently meant *A. montanus* Richardson.

From Professor Nelson's discussion, one also gets the impression that *A. meritus* Nels. is not found in the subarctic regions, and is a plant of the Rocky Mountains only, but this is not the fact. The specimens regarded as *A. Richardsonii* by Hooker and cited in his Flora, as collected in the "barren country from lat. 64° to the Arctic Seas" belong to *A. meritus*. Two of Richardson's specimens are in the herbarium of Columbia University. These cannot be distinguished from Nelson's nos. 2334 and 6610 cited under *A. meritus*.

As said before, Richardson collected both plants. Hooker was the first one to distinguish them and made one the species, the other the variety of *A. Richardsonii* Spreng., as *A. montanus* Richardson was not available on account of the older *A. montanus* Nutt., *A. Richardsonii* Spreng. being only a substitute for the former. Under ordinary circumstances, we should have followed Hooker's interpretation and used *A. Richardsonii* for the short-pubescent

* Bot. Gaz. 37: 268. 1904.

plant. The writer made such a ruling in 1901, when he raised *A. Richardsonii*, var. *gigantea* to specific rank. But it is evident from Richardson's description that his *A. montanus* characterized rather the more villous-tomentose plant. Not only was Sprengel's *A. Richardsonii* based upon *A. montanus* Richardson, but his description also characterizes Hooker's var. *gigantea*.

The synonymy of the more southern plant is as follows:

ASTER MERITUS A. Nelson, Bot. Gaz. **37**: 269. 1904

Aster montanus Richardson, App. Frankl. Journ. 32, in part (?). 1823.

Aster Richardsonii Hook. Fl. Bor.-Am. **2**: 7. 1834. Not *A. Richardsonii* Spreng. 1826.

Aster sibiricus A. Gray, Syn. Fl. **1**²: 176. 1884. Not *A. sibiricus* L. 1753.

***Aster Williamsii* sp. nov.**

Perennial, with caespitose rootstock; stems erect, about 3 dm. high, more or less villous; leaves oblanceolate, 3–10 cm. long, the lower petioled, the upper sessile, finely villous on both sides; heads few in a corymbiform inflorescence; involucre 8 mm. high, 1 cm. broad; bracts linear or lance-linear, acute, sparingly and finely villous on the back, slightly scarious-margined below, imbricate in 3 series; rays lilac, about 1 cm. long; achenes sparingly and finely pilose; pappus tawny.

This species is somewhat intermediate between *Aster andinus* and *A. meritus*. From the former it differs in the taller and more slender, erect stem, the finely villous leaves, the shorter, more numerous and more pubescent involucre bracts; and from the latter in the narrower leaves, which are always entire, in the comparatively higher involucre, and the narrower bracts.

WYOMING: Dry hills, North Fork of Clear Creek, Big Horn Mountains, Aug. 12, 1898, *T. A. Williams* (type, in herb. N. Y. Bot. Gard.); eastern slope of Big Horn Mountains, headwaters of Clear Creek and Crazy Woman River, July 20–Aug. 15, 1900, *Tweedy 3096A*.

***Aster Macounii* sp. nov.**

Perennial, with a rootstock; stem 3–6 dm. high, sparingly hispid-strigose, purple-tinged; leaves thick, oblanceolate or lanceolate, 2–8 cm. long, hispidulous-ciliate, otherwise glabrous; in-

florescence corymbiform ; heads solitary on branches with lanceolate bract-like leaves ; involucre 8–10 mm. high, 12–15 mm. broad ; bracts oblanceolate, squarrose, acute and spinulose-tipped, pubescent on the back and ciliate on the margins ; rays 7–8 mm. long, rose-colored ; achenes strigose, pappus pinkish tawny.

This species combines the characters of two different groups of asters. It has the habit, leaves, middle-sized heads, pappus, and pubescence of the bracts of *Aster Nelsonii*, *A. griseus*, and their allies, but has the spinulose- or callus-tipped bracts and upper leaves of *A. multiflorus*, *A. commutatus*, etc.

CANADA : Old Wives Lake, Northwest Territory [Keewatin], July, 1880, *John Macoun* (type, in herb. Columbia Univ.).

ASTER LINDLEYANUS T. & G. Fl. N. Am. 2 : 122. 1841

Aster paniculatus, var. δ Lindl. in Hook. Fl. Bor.-Am. 2 : 8. 1834.

Dr. Gray in his Synoptical Flora* stated : “The original of this species was raised by Gordon from Labrador seeds and has more extended inflorescence of smaller heads than is common in the wild plant.” Dr. Gray evidently referred to *Aster paniculatus* Ait. ; † however, *A. Lindleyanus* was not based on *A. paniculatus* Ait., but principally on *A. paniculatus*, var. δ of Lindley in Hooker’s Flora, although *A. paniculatus* of the same work was partly included. The var. δ was collected by Richardson near Slave Lake. Whether this plant is the same as *A. paniculatus* Ait. is very doubtful. *Aster Lindleyanus* has been reported from many stations in eastern North America as far south as Ohio, but the eastern plant differs somewhat from that of the Mackenzie basin and the northern Rockies in thinner more decidedly cordate basal leaves, and in its bracts with more conspicuous green tips. As these differences are hardly specific it is best to leave the eastern plant in *A. Lindleyanus*. In the northern Rockies and the Saskatchewan region there are found plants which have been referred to *A. Lindleyanus* but which the writer thinks are distinct. They can be distinguished as follows :

Basal leaf-blades cordate or broadly ovate ; upper stem-leaves lanceolate ; achenes glabrous.

Petioles, midribs, and usually also the stem pubescent with long white hairs..... *A. Wilsonii*.

* 1² : 182. 1884.

† Hort. Kew. 3 : 207. 1789.

- Plant glabrous or sparingly short-pubescent..... *A. Lindleyanus*.
 Basal leaf-blades lanceolate ; upper stem-leaves narrowly lanceolate
 or those of the inflorescence lance-linear.
 Heads few ; involucre 8-9 mm. high ; rays about 15 mm. long ;
 achenes glabrous..... *A. MacCallae*.
 Heads numerous ; involucre 5-6 mm. high ; rays 8-10 mm.
 long ; achenes hispidulous-strigose *A. Butleri*.

***Aster Wilsonii* sp. nov.**

Aster Lindleyanus β T. & G. Fl. N. Am. 2 : 122. 1841.

Perennial, with a horizontal rootstock ; stem 3-6 dm. high often purplish, more or less pubescent with long white, curved, somewhat deciduous hairs ; basal leaves petioled ; petioles 5-10 cm. long, densely white-ciliate, together with the midrib ; blades ovate or subcordate, 5-10 cm. long, usually more or less hirsute on both sides, but in age glabrate, serrate, acuminate at the apex ; the lower stem-leaves similar ; the upper lanceolate, sessile, subentire or those of the paniculate inflorescence narrowly lanceolate ; involucre 7-8 mm. high, scarcely 1 cm. wide ; bracts subulate, attenuate, with a green midrib which widens somewhat above the middle ; rays 8-10 mm. long, bluish purple ; pappus tawny ; achenes glabrous.

This species is related to *Aster Lindleyanus* and may grade into it, but the typical specimens are very distinct, characterized by the long white hairs on the petioles, midribs, and often the stem, by the narrower upper leaves, the smaller heads, and the more ascending branches.

BRITISH COLUMBIA : Armstrong, 1904, *E. Wilson* 419 (type, in herb. N. Y. Bot. Gard.) ; also 414, 416, and 393.

ALBERTA : Grattan Creek, Aug. 16, 1906, *Macoun & Herriot* 77073 ; also Edmonton, Aug. 26, 1906, 77074.

WESTERN ONTARIO : Fort Williams, Sept. 7, 1889, *Dr. and Mrs. N. L. Britton and Miss Millie Timmerman*.

MACKENZIE : Fort Resolution and Mackenzie River, 1861-2, *R. Kennicott*.

***Aster MacCallae* sp. nov.**

(?) *Aster praecox* Lindl. in Hook. Fl. Bor.-Am. 2 : 9. 1834.
 Not *A. praecox* Willd. 1813.

Perennial, with a horizontal rootstock ; stems 3-6 dm. high, often purplish, glabrous up to the inflorescence, the branches of which are slightly pubescent in lines ; lower leaves with winged

petioles, which are slightly dilated and ciliate at the base; blades broadly lanceolate, 8–15 cm. long, usually more or less serrate with ascending teeth, acute, glabrous or essentially so, hispidulous-ciliolate on the margins, rather thick; upper leaves lanceolate, sessile or those of the inflorescence lance-linear; inflorescence or its few principal branches racemiform; involucre 8–9 mm. high, 1 cm. broad; bracts subulate, glabrous, with linear-lanceolate green tips and green midveins below; rays blue or bluish purple, about 15 mm. long; disk-flowers red-purple; achenes glabrous, at least in age.

This may be the *A. praecox* of Hooker's Flora Boreali-Americana; but the name is preoccupied by *A. praecox* Willd. It is related to *A. Lindleyanus*, but differs in the narrower leaves, of which the lower are neither cordate nor broadly ovate and those of the inflorescence are lance-linear, in the larger rays, which are about 15 mm. long, and in the more ascending branches of the simpler inflorescence.

ALBERTA: Along streams, edge of woods on the Sulphur Mountain, Aug. 16, 1899, *McCalla 2026* (type, in herb. N. Y. Bot. Gard.); roadside, Spray Avenue, Banff, Sept. 18, 1899, *McCalla 2027*; below Wapta Lake, Aug. 6, 1904, *J. Macoun 69480*; gravelly banks, Second Lake, Rocky Mountain Park, Aug. 3, 1891, *Macoun 7770*.

***Aster Butleri* sp. nov.**

Perennial, with a horizontal rootstock; stem 4–10 dm. high, glabrous, slender; lower leaves petioled; blades lanceolate, about 1 dm. long, distantly serrate with ascending teeth, hispidulous-ciliolate on the margins, otherwise glabrous; upper stem-leaves sessile, narrowly lanceolate, or those of the inflorescence lance-linear, entire; inflorescence paniculate with numerous heads; involucre 5–6 mm. high, about 8 mm. wide; bracts subulate, with green midribs and narrowly lanceolate green tips, attenuate, glabrous; rays bluish purple, 8–10 mm. long; achenes hispidulous-strigose.

This is related to the preceding, but differs from it in the large inflorescence with numerous small heads, and in the pubescent achenes. In the latter respect it differs from all the species of the *Aster Lindleyanus* group.

MONTANA: Gateway, Aug. 16, 1908, *B. T. Butler 443* (type, in herb. N. Y. Bot. Gard.); also 433.

ALBERTA: Field, Aug. 28, 1904, *J. Macoun* 65485.

BRITISH COLUMBIA: Flood plains of Columbia at Beavermouth, Aug. 18, 1905, *C. H. Shaw* 1165; Armstrong, 1904, *E. Wilson* 422 (?); Emerald Lake, Aug. 30, 1904, *J. Macoun* 65488 (in part).

***Aster subsalignus* sp. nov.**

Perennial, with a rootstock; stem glabrous throughout, 6–10 dm. high; leaves nearly erect, glabrous, glaucous, entire, clasping but scarcely auricled, 5–10 cm. long, narrowly linear, 6–7 mm. wide, or the lower narrowly linear-oblongate, or those of the branches lance-linear and reduced; inflorescence paniculate; involucre about 7 mm. high and 8 mm. wide; bracts linear or the outer linear-lanceolate, glabrous, acute, with a green midrib and narrowly lanceolate green tip, or the outer nearly wholly green; rays bluish or bluish purple, about 8 mm. long; achenes glabrous; pappus tawny; disk-flowers dark, red-purple.

This is related to *Aster Geyeri*, but differs in the narrow leaves, scarcely auricled at the base; they are also more erect or strongly ascending and wholly entire. It stands in the same relation to *Aster Geyeri* as *A. virgatus* and *A. concinnus* do to *A. laevis*. It has the narrow green tips of the bracts found in *A. Geyeri* but not in the others. The spreading branches of the inflorescence with their very small bract-like leaves characteristic of the three are not found in this species, and scarcely in *A. Geyeri*.

COLORADO: Glenwood Springs, Aug. 18, 1906, *G. E. Osterhout* 3397 (type, in herb. N. Y. Bot. Gard.).

ASTER WOOTONII Greene, Leaflets 1: 146. 1905.

Aster hesperius Wootonii Greene, Bull. Torrey Club 25: 119. 1898.

In raising the variety to specific rank, Dr. Greene stated: "Mr. Baker's n. 817 from near Gunnison represents well that of Mr. Wooton's distribution from New Mexico, and I judge the form worthy of specific rank." In the herbarium of the New York Botanical Garden there are duplicates of both *Baker* 817 and *Wooton* 329, the latter the type of *A. hesperius Wootonii*. The two are not the same. The latter has the subequal loose bracts and entire leaves of *A. hesperius*, and is best referred to that species; in fact it matches very closely *Wright* 1158, which number I take to be the type of *A. hesperius*. In the former the bracts are well

imbricated in 3 or 4 unequal series and the leaves are distinctly dentate and it agrees in every respect with specimens of *A. paniculatus*. In the writer's judgment it is nothing but the not uncommon pinkish- or light lilac-flowered form of that species.

***Aster roseolus* sp. nov.**

Perennial, with a horizontal rootstock; stem 3–5 dm. high, often purple-tinged, glabrous, pilose in lines on the branches; leaves linear, glabrous or nearly so, scabrous-ciliolate on the margins, 5–10 cm. long, 5–12 mm. wide, inflorescence paniculate but the heads usually few; involucre about 5 mm. high, 8–9 mm. broad; bracts glabrous, oblong or oblong-linear, acute, in about 3 series, often wholly green, with broadly lanceolate tips; rays rose-colored, 5–6 mm. long; achenes hispidulous-strigose.

This species is related to *Aster longulus* and *A. Tradescanti*, but differs in the bright rose-colored rays, the less numerous heads, simpler plant, and broader leaves. It grows in meadows at an altitude of 1500–2000 m.

MONTANA: Melrose, 1895, *Rydberg 2817* (type, in herb. N. Y. Bot. Gard.); Lima, Aug. 5, 1895, *Rydberg*; Logan, July 28, 1895, *Shear 5253*; Emigrant Gulch, Aug. 23, 1897, *Rydberg & Bessey 5121*.

***Aster Franklinianus* Rydb. nom. nov.**

Aster salicifolius Richardson, in Frankl. Journ. 748. 1823. Not

Aster salicifolius Lam. 1783.

Aster laxiflorus Lindl. in Hook. Fl. Bor.-Am. 2: 10, mainly. 1834.

Not *Aster laxiflorus* Nees. 1833.

Aster laxiflorus borealis T. & G. Fl. N. Am. 2: 138, in part. 1841.

Dr. Gray referred this to *Aster junceus* but it is more closely related to *A. longifolius*, having the subequal bracts and the dark green leaves of that species, but the bracts are narrower and strictly appressed and the leaves are very narrowly linear and as far as I know perfectly entire. It is *A. laxiflorus* of Lindley mainly but he included a specimen of Mrs. Percival's from eastern Canada (apparently of *A. junceus*), and this very specimen is the type of *A. laxiflorus borealis* T. & G. Otherwise the species would have become *A. borealis* Prov., as Provancher raised the variety to specific rank. He also characterized the eastern plant. The following specimens belong to *A. Franklinianus*:

MACKENZIE TERR.: Slave Lake, *Richardson*; Wooded Country, *Richardson*; Mackenzie River 1861-2, *Kennicott*; Fort Resolution, 1861-2, *Onion, Kennicott & Hardisty*.

SASKATCHEWAN: 1857-8, *E. Bourgeau*.

MONTANA: Gateway, Aug. 17, 1908, *Butler* 477, 473, and 434; Helena, Aug. 16, 1892, *Kelsey*.

***Aster junciformis* sp. nov.**

Aster juncus Coulter, Man. 161, in part. 1885.

Aster longulus Rydb. Fl. Colo. 356. 1906. Not *Aster longulus* Sheldon. 1894.

Perennial, with a slender horizontal rootstock; stem slender, 3-5 dm. high, simple below, with pilose lines or wholly glabrous below; leaves narrowly linear, 4-8 cm. long, 2-4 mm. wide, scabrous-ciliolate on the margins, light green; inflorescence corymbiform, with the rather few heads terminating the stem and leafy branches; involucre about 6 mm. high, about 1 cm. broad; bracts glabrous, erose-ciliolate; the inner bracts linear, acute, with green midrib and green lanceolate tips, the outer oblong or somewhat oblanceolate, obtuse, and often almost wholly green; rays white, 6-8 mm. long; achenes sparingly hairy or nearly glabrous.

This has been known under the name of *A. juncus* in nearly all western botany, but differs in the always white rays, the sub-corymbose inflorescence, and the broader bracts. In the eastern *A. juncus* the bracts are narrowly linear or linear-subulate and the rays are always described as light purple.

MONTANA: East Gallatin Swamps, July 24, 1896, *Flodman* 833 (type, in herb. N. Y. Bot. Gard.).

NORTH DAKOTA: Butte, Aug. 5, 1906, *Lunell*.

SOUTH DAKOTA: Custer, Aug. 15, 1892, *Rydberg* 775.

COLORADO: West Cliff, 1896, *Shear* 3463, 3817; Twin Lakes, *Clements* 388 and 379.

MINNESOTA: Minneapolis, 1891, *G. B. Aiton*; Hennepin County, 1890, *Sandberg*.

SASKATCHEWAN: Cypress Hills, 1880, *J. Macoun*; Lake Manitou, July 23, 1906, *Macoun & Herriot* 77052; also Bear Hills, July 29, 77051.

ALBERTA: Five miles west of Battle River, 1906, *Macoun & Herriot* 77053; also Grattan Creek, Aug. 16, 77050.

BRITISH COLUMBIA: Swamps at Gold Stream, Aug. 3, 1905, Shaw 1081.

***Aster eriocaulis* sp. nov.**

Perennial, with a rootstock; stems about 8 dm. high, leafy, more or less villous, especially above, purplish; stem-leaves lanceolate, 3–7 cm. long, ciliolate on the margins, otherwise glabrous, more or less auriculate-clasping; inflorescence a round-topped panicle; involucre 8 mm. high, 10–12 mm. broad; bracts linear, acute, more or less ciliate, in 2–3 series, with green midrib and lanceolate green tips, or the outermost almost wholly green; rays purple, 8–10 mm. long; achenes sparingly hirsute-strigose.

This species is perhaps most nearly related to *Aster lonchophyllus* but differs in the longer villous pubescence of the stem, the more or less clasping leaves, less imbricated and not purple-tinged bracts. In general habit and leaf-form it resembles somewhat *A. Jessicae*, but differs in the glabrous leaves and narrower glabrous bracts.

IDAHO: Mountain meadows, valley of Traile River, Kootenai County, Aug. 9, 1892, Sandberg, MacDougal, & Heller 877 (type, in herb. N. Y. Bot. Gard.).

***Aster subcaudatus* sp. nov.**

Perennial, with a creeping rootstock; stem 3–6 dm. high, more or less purple, glabrous below, with villous or pilose peduncles and lines above; lower leaves petioled, 1–2 dm. long; blades lanceolate, 4–10 cm. long, often sparingly dentate with ascending sharp teeth, dark green, glabrous, ciliolate on the margins; upper leaves sessile, linear-lanceolate, attenuate; panicle open, with rather few heads; involucre 7–8 mm. high, about 12 mm. broad; bracts linear-subulate, in 2 or 3 series, but nearly of the same length, attenuate, the inner almost caudate, only slightly white-margined below; rays purple, about 1 cm. long; achenes nearly glabrous.

The type was determined as *Aster Fremontii* (?), but is evidently distinct; differing from that species as well as its relatives, *A. occidentalis*, *A. ciliomarginatus*, etc., in the narrow attenuate bracts. It is also a taller plant with a tendency to having dentate leaves. If one should use Piper's key in his Flora of Washington it would fall under *A. occidentalis* Nutt. The latter, as described in Gray's Synoptical Flora, has well-imbricated bracts, of which the outer are shorter; but neither the present species nor Gray's

description agrees with the original diagnosis of *Aster occidentalis*. It may be that the plant described by Gray should receive a new name. I have not seen Nuttall's type and shall await the chance of seeing it before making such a change.

ALBERTA : Laggan, Lake Louise region, alt. 1950 m., Aug. 23, 1902, *Rosendahl 1089* (type, in herb. N. Y. Bot. Gard.); also *1061*.

IDAHO : Priest Lake, Aug. 1901, *Piper 4120, 3723, 3682*.

MONTANA : Rost Lake, July 15-16, 1901, *MacDougal 661*; Big Fork, July 24, 1908, *Butler 697*.

***Aster Umbachii* sp. nov.**

Perennial, with a slender rootstock; stem slender, erect, simple, glabrous below, sparingly pilose above, 3-5 dm. high; lower leaves about 1 dm. long, petioled; blades broadly oblanceolate or lanceolate, dark green, more or less crenate, acute, glabrous, ciliolate on the margins; middle stem-leaves similar but the petioles with dilated, clasping bases; upper stem-leaves lanceolate, sessile; heads 1-3 in a corymbiform inflorescence; involucre 8-9 mm. high, 12-15 mm. broad; bracts in about 2 series, oblong-oblanceolate, acute, not very unlike in length, glabrous, slightly ciliate, with broad lanceolate green tips; rays dark bluish-purple, fully 1 cm. long; achenes almost glabrous; pappus tawny.

This species is most nearly related to *Aster ciliomarginatus* Rydb. (*A. glastifolius* Greene); but differs in the dark green and mostly crenate leaves and broader and more conspicuously green-tipped bracts. In *A. ciliomarginatus* the leaves are light green, more or less glaucous and entire.

MONTANA : River bank, Lake McDonald, Aug. 20, 1901, *Umbach 275* (type, in herb. N. Y. Bot. Gard.); also *267*.

***Aster Mearnsii* sp. nov.**

Perennial, with a rootstock; stem 3-10 dm. high, leafy, branched, glabrous below, sparingly pubescent above; leaves linear, 5-10 cm. long, ascending-spreading, sessile, entire, glabrous and smooth beneath, scabrous or glabrate above, scabrous-ciliolate on the margins; inflorescence large, paniculate, leafy; heads numerous, disk about 8 mm. high and barely 1 cm. broad; bracts oblanceolate, acute, some longer than the disk; rays about 8 mm. long, white or pinkish; achenes strigulose.

This species is intermediate between *A. oreganus* Nutt. and *A. proximus* Greene. It has often been mistaken for the former, as it has the same narrow leaves and general habit, but differs in the involucre, which is essentially that of *A. proximus*, consisting of foliaceous oblanceolate outer bracts and shorter merely green-tipped inner ones ; but the bracts are less squamose and the leaves much narrower, darker in color, and firmer.

WYOMING : Mammoth Hot Springs, Oct. 11, 1902, *Mearns* 4806 (type, in herb. N. Y. Bot. Gard.) ; same locality and collector, Aug. 2, 2731 (?) ; Aug. 17, 3390 ; Gardiner River, Sept. 11, 1902, *Mearns* 3915 ; Mt. Leidy, Aug., 1897, *Tweedy* 561.

MONTANA : Bozeman, Aug. 24, 1892, *Kelsey* ; near Rost Lake, Aug., 1901, *MacDougal* 887a ; Belt River, Oct., 1883, *F. W. Anderson* 3803v.

SASKATCHEWAN : Cypress Hills, Aug. 5, 1880, *J. Macoun* 7938.

ALBERTA : Crows Nest Pass, July 31, 1897, *J. Macoun* 23076 ; overflow from Middle Spring, Banff, July 16, 1899, *Sanson* 2241 ; Banff, Sept. 24, 1904, *J. Macoun* 65486.

***Aster phyllodes* sp. nov.**

Aster foliaceus Britt. & Brown, Ill. Fl. 3 : 371 (excluding figure). 1898. Not *A. foliaceus* Lindl. 1835.

The plant described in Britton & Brown's Illustrated Flora is not *Aster foliaceus* Lindl. of the Northwest, which is a simple plant, with 1-3 large heads and narrowly linear-lanceolate leaves. The figure in the Illustrated Flora was not drawn from my Kimball County plant as stated there. It probably does not represent an *Aster* at all. Evidently some illustrations have been interchanged. The Nebraska plant is nearer to *A. puniceus* in habit than to *A. foliaceus*, although the pubescence and bracts approach the latter. It is more closely related to *A. proximus* Greene, but differs in the more or less toothed and more distinctly auriculate, darker leaves.

The only specimens seen are the following :

NEBRASKA : Lodge Pole Creek, near Kimball, Kimball County, Aug. 12, 1891, *Rydberg* 165 (type).

COLORADO : West of Livermore, Larimer Co., Aug. 26, 1896, *Osterhout* 2953.

***Xylorrhiza lanceolata* sp. nov.**

Shrubby perennial, with white stems; branches more or less villous; leaves lanceolate, 4–6 cm. long, more or less villous, especially when young, reticulately veined, dentate with spinulose-subulate teeth, which are directed forward and then falcately curved outward; peduncles 1–2 dm. long; involucre fully 1 cm. high, 15–20 mm. broad; bracts lance-subulate, villous and slightly glandular, attenuate and spinulose-tipped, the inner about equaling the disk, a few of the outer ones often longer and squarrose; rays purple, about 2 cm. long; achenes hirsute; pappus brownish tawny.

This is related to *Xylorrhiza tortifolia* (T. & G.) Greene, but differs in the broader leaves and their teeth. In *X. tortifolia*, the body of the leaves is linear or narrowly linear-lanceolate, the teeth are shorter and broader and diverge at almost right angles to the midrib; the outer bracts are neither elongated nor spreading.

UTAH: St. George, 1877, *Palmer 208* (type, in herb. Columbia Univ. and N. Y. Bot. Gard.); South Utah, 1875, *J. E. Johnson*; 1874, *C. C. Parry 91* (?).

***Unamia alba* (Nutt.) Rydb. comb. nov.**

Inula (*Chrysopsis*) *alba* Nutt. Gen. 2: 152. 1818.

Aster albus Eat. Man. Bot. 127. 1829. Not *Aster albus* Willd. 1826.

Doellingeria ptarmicoides Nees, Gen. & Sp. Ast. 183. 1833.

Chrysopsis alba Nutt.; Nees, Gen. & Sp. Ast. 183, as a synonym. 1833.

Diplopappus albus Hook. Fl. Bor.-Am. 2: 21. 1834.

Heliastrum album DC. Prod. 5: 264. 1836.

Encephalus albus Nutt. Trans. Am. Phil. Soc. II. 7: 299. 1840.

Aster ptarmicoides T. & G. Fl. N. Am. 2: 160. 1841.

Unamia ptarmicoides Greene, Leaflets 1: 6. 1903.

From the various disposition which has been made of this plant, it is evident that the species has been out of place in all the genera to which it had been referred. I therefore agree with Dr. Greene that it represents the type of a distinct genus. Unfortunately Dr. Greene did not use the first available specific name, which is here accepted. Usually the original publication is given as *Chrysopsis alba* Nutt. Gen. 2: 152. 1818. In that work

Nuttall, however, did not publish it as *Chrysopsis* but as *Inula*, *Chrysopsis* being only a subgeneric name. The Kew Index cites DC. Prod. (*l. c.*) as the place of publication of the combination *Chrysopsis alba*, but it appeared at least one year earlier in Nees's Genera. In describing the genus *Unamia*, Dr. Greene stated : " And that the bristles of the pappus are visibly dilated at the tip is a character, here for the first time noted." This appears to be not quite the fact, for we find in the sectional description in Torrey & Gray's Flora : " the longer bristles clavellate-thickened at the apex ;" and in Gray's Synoptical Flora : " pappus white, of rather rigid bristles, longer ones manifestly clavellate at tip." The expressions used by these authors are even more characteristic than Greene's description, for the pappus-bristles are by no means flattened, as the word " dilated " usually implies.

***Unamia lutescens* (Lindl.) Rydb. comb. nov.**

Diplopappus albus β Hook. Fl. Bor.-Am 2 : 21. 1834.

Diplopappus lutescens Lindl.; DC. Prod. 5 : 278. 1834.

Aster lutescens T. & G. Fl. N. Am. 2 : 160. 1841.

Aster ptarmicoides lutescens A. Gray, Syn. Fl. 1² : 199. 1888.

The color of the rays, yellow or ochroleucous as it has been described, is probably of little value specifically and may vary ; but in the specimens seen the bracts are " very obtuse " as described in Torrey & Gray's Flora, the inner even rounded at the apex and therefore different from those of the typical *U. alba*. The range of this species seems to be more restricted than that of *U. alba*, extending from Illinois and Wisconsin to Saskatchewan.

***Doellingeria pubens* (Gray) Rydb. sp. nov.**

Aster umbellatus pubens A. Gray, Syn. Fl. 1² : 197. 1884.

This I think specifically distinct from *D. umbellata* (Mill.) Nees.

***Machaeranthera angustifolia* nom. nov.**

Machaeranthera linearis Rydb. Mem. N. Y. Bot. Gard. 1 : 398.

1900. Not *M. linearis* Greene. 1897.

***Machaeranthera leptophylla* sp. nov.**

Biennial, caespitose at the base ; stems slender, simple up to the inflorescence, green, sparingly puberulent, 3-5 dm. high ;

lower leaves petioled, 2-5 cm. long, finely cinereous-puberulent, in age sparingly so; blades spatulate or oblanceolate, entire or sparingly dentate, thin; upper leaves linear-oblanceolate or linear, entire; branches strongly ascending; involucre turbinate, 8 mm. high, 8-10 mm. broad; bracts in 6 or 7 series, linear, acute; green tip short, glandular-puberulent, much shorter than the chartaceous portion, only slightly squarrose; rays rose-purple, about 8 mm. long; achenes finely strigose.

This agrees fairly well with the description of *M. laetevirens* Greene, except that the plant is evidently cinereous-puberulent.

UTAH: Logan, Aug. 9, 1895, *Rydberg* (type, in herb. N. Y. Bot. Gard.).

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